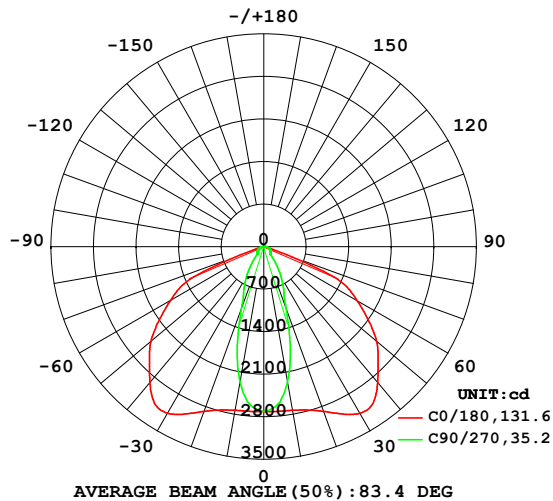


LUMINAIRE PHOTOMETRIC TEST REPORT

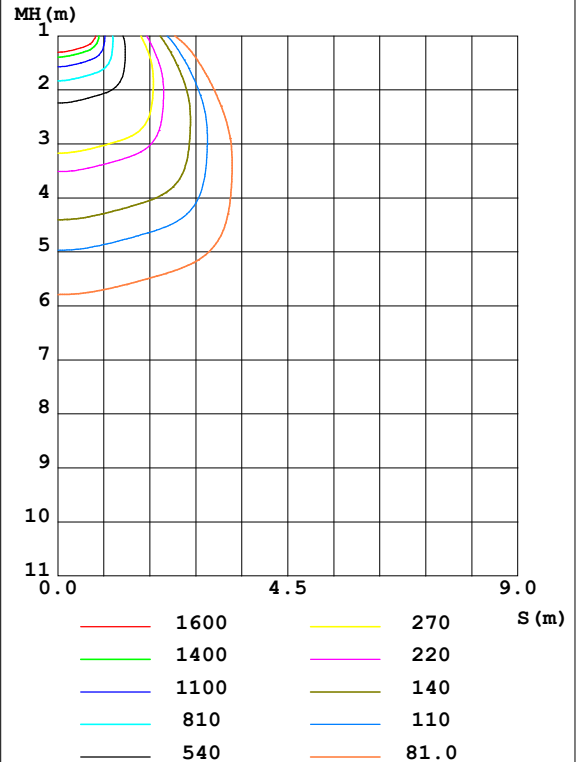
Test:U:230.0V I:0.1377A P:30.79W PF:0.9722 Lamp Flux:3850.02x1 lm		
NAME: LHB01-30	TYPE:30W	WEIGHT:
SPEC.:5000K Ra70 40130DEG L02804	DIM.: 0.28*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.25*0.1	Shielding Angle:

DATA OF LAMP		PHOTOMETRIC DATA Eff: 125.04 lm/W			
MODEL	LHB01-30	I _{max} (cd)	3181	S/MH (C0/180)	1.65
NOMINAL POWER(W)	30	LOR(%)	100.0	S/MH (C90/270)	0.58
RATED VOLTAGE(V)	230	TOTAL FLUX(lm)	3850.0	η UP,DN (C0-180)	0.0,49.8
NOMINAL FLUX(lm)	3850.02	CIE CLASS	DIRECT	η UP,DN (C180-360)	0.0,50.2
LAMPS INSIDE	1	η up (%)	0.0	CIBSE SHR NOM	0.50
TEST VOLTAGE (V)	230	η down (%)	100.0	CIBSE SHR MAX	0.65

LUMINOUS INTENSITY DISTRIBUTION DIAGRAM



C0 PLANE ISOLUX DIAGRAM (UNIT:lx)



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-30

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

ZONAL FLUX DIAGRAM

ZONAL FLUX DIAGRAM:

γ	C0	C45	C90	C135	C180	C225	C270	C315	γ	Φ zone	Φ total	%lum, lamp
5	2721	2657	2608	2657	2721	2662	2608	2662	0- 5	64.20	64.20	1.67,1.67
10	2734	2491	2259	2491	2734	2509	2259	2509	5- 10	184.7	248.9	6.46,6.46
15	2784	2187	1688	2187	2784	2210	1688	2210	10- 15	279.6	528.4	13.7,13.7
20	2886	1776	1063	1776	2886	1794	1063	1794	15- 20	336.7	865.2	22.5,22.5
25	3037	1315	779.6	1315	3037	1321	779.6	1321	20- 25	364.3	1229	31.9,31.9
30	3166	955.2	576.2	955.2	3166	953.5	576.2	953.5	25- 30	385.3	1615	41.9,41.9
35	3138	795.4	372.7	795.4	3138	791.8	372.7	791.8	30- 35	391.2	2006	52.1,52.1
40	2916	612.0	169.2	612.0	2916	608.6	169.2	608.6	35- 40	368.7	2375	61.7,61.7
45	2664	400.3	154.8	400.3	2664	397.8	154.8	397.8	40- 45	326.9	2702	70.2,70.2
50	2424	168.7	141.9	168.7	2424	165.4	141.9	165.4	45- 50	290.9	2993	77.7,77.7
55	2099	133.9	129.1	133.9	2099	132.3	129.1	132.3	50- 55	254.5	3247	84.3,84.3
60	1774	113.3	116.3	113.3	1774	112.1	116.3	112.1	55- 60	214.0	3461	89.9,89.9
65	1447	92.35	102.7	92.35	1447	91.81	102.7	91.81	60- 65	174.6	3636	94.4,94.4
70	497.6	69.13	83.27	69.13	497.6	69.45	83.27	69.45	65- 70	120.1	3756	97.5,97.5
75	62.03	50.13	63.05	50.13	62.03	50.54	63.05	50.54	70- 75	50.40	3806	98.9,98.9
80	16.43	34.39	42.83	34.39	16.43	34.30	42.83	34.30	75- 80	24.66	3831	99.5,99.5
85	1.576	18.81	22.60	18.81	1.576	18.15	22.60	18.15	80- 85	13.85	3845	99.9,99.9
90	1.786	3.310	2.383	3.310	1.786	2.054	2.383	2.054	85- 90	5.445	3850	100,100
95									90- 95			
100									95-100			
105									100-105			
110									105-110			
115									110-115			
120									115-120			
125									120-125			
130									125-130			
135									130-135			
140									135-140			
145									140-145			
150									145-150			
155									150-155			
160									155-160			
165									160-165			
170									165-170			
175									170-175			
180									175-180			
DEG	LUMINOUS INTENSITY:cd									UNIT:lm		

Conical surface Flux(90deg): 2701.6 lm

%lum = 70.2%

%lamp = 70.2%

Conical surface Flux(120deg): 3461 lm

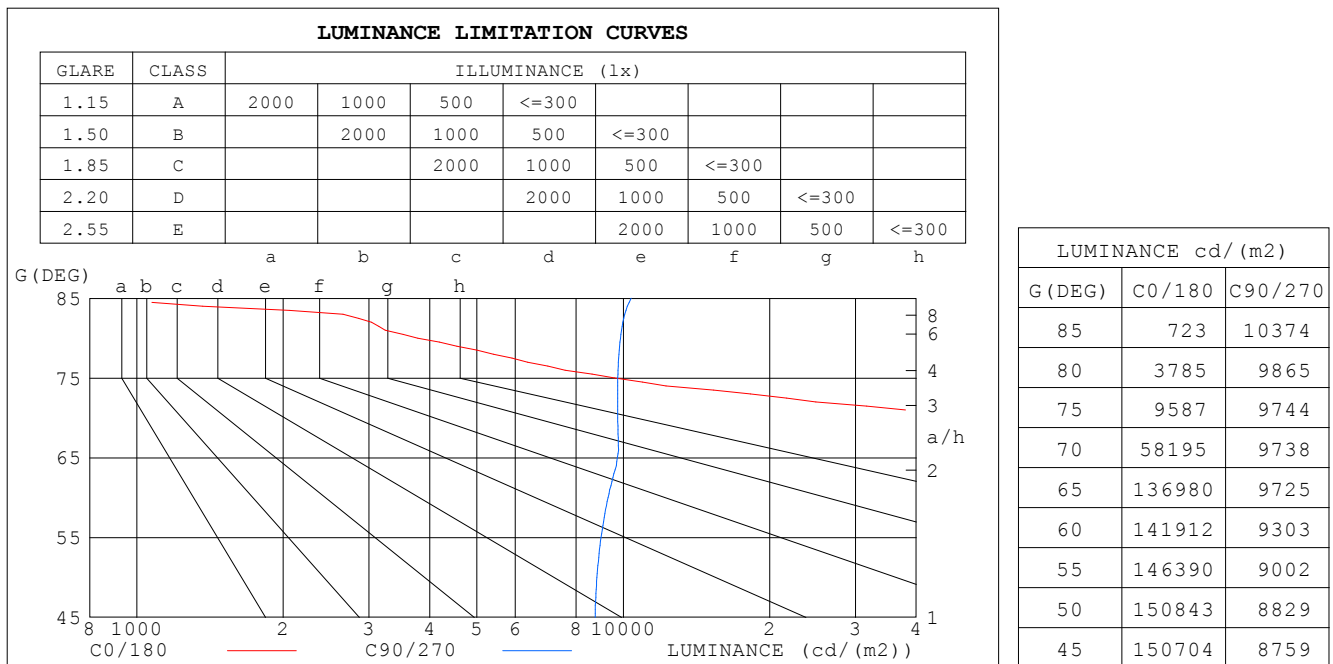
%lum = 89.9%

%lamp = 89.9%

C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature:25.3DEG
 Operators:
 Test Date:2017-03-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity:65.0%
 Test Distance:9.500m [K=1.0000]
 Remarks:

LUMINANCE LIMITATION CURVES

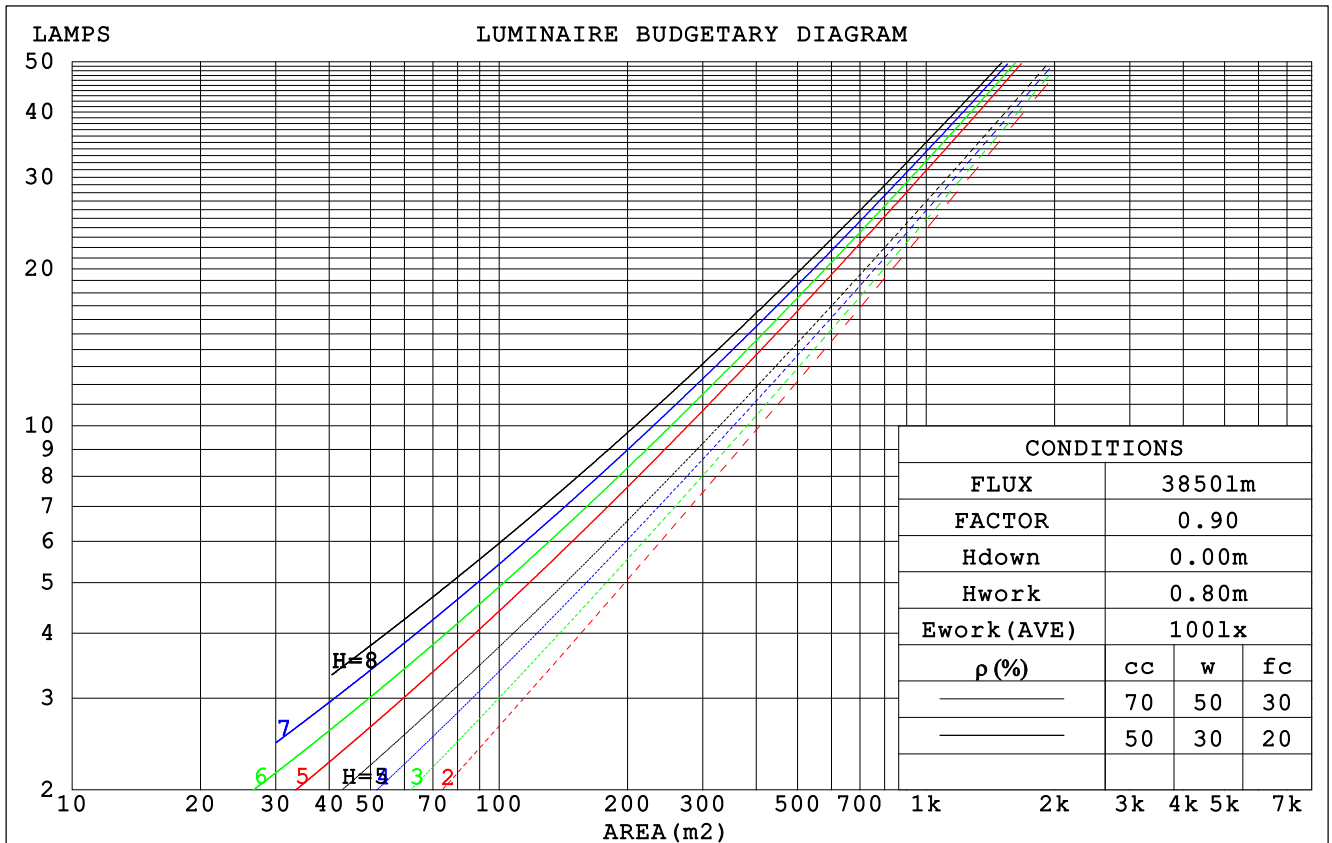


C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.500m [K=1.0000]
Remarks:

CU AND LUMINAIRE BUDGETARY ESTIMATE DIAGRAM

ρ_{cc}	80%			70%			50%			30%			10%			0
ρ_w	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
ρ_{fc}	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio			Coefficients of Utilization(CU)												
0.0	1.19	1.19	1.19	1.16	1.16	1.16	1.11	1.11	1.11	1.06	1.06	1.06	1.02	1.02	1.02	.00
1.0	1.07	1.04	1.01	1.05	1.02	.99	1.01	.98	.96	.97	.95	.93	.94	.92	.91	.89
2.0	.96	.91	.86	.94	.89	.85	.91	.87	.83	.88	.84	.81	.85	.82	.80	.78
3.0	.87	.80	.74	.85	.79	.74	.82	.77	.73	.80	.75	.71	.77	.73	.70	.68
4.0	.78	.71	.65	.77	.70	.65	.75	.69	.64	.73	.67	.63	.71	.66	.62	.60
5.0	.71	.64	.58	.70	.63	.58	.68	.62	.57	.66	.61	.56	.65	.60	.56	.54
6.0	.65	.57	.52	.64	.57	.52	.63	.56	.51	.61	.55	.51	.60	.54	.50	.49
7.0	.60	.52	.47	.59	.52	.47	.58	.51	.46	.56	.51	.46	.55	.50	.46	.44
8.0	.56	.48	.43	.55	.48	.43	.54	.47	.42	.52	.47	.42	.51	.46	.42	.40
9.0	.52	.44	.39	.51	.44	.39	.50	.43	.39	.49	.43	.39	.48	.43	.39	.37
10.0	.48	.41	.36	.48	.41	.36	.47	.40	.36	.46	.40	.36	.45	.40	.36	.34



C Range: 0 - 360DEG
 C Interval: 5.0DEG
 Test Speed: HIGH
 Temperature: 25.3DEG
 Operators:
 Test Date: 2017-03-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
 Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
 Humidity: 65.0%
 Test Distance: 9.500m [K=1.0000]
 Remarks:

WEC AND CCEC

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Wall Exitance Coefficients (WEC)									
0.0																
1.0	.244	.139	.044	.237	.135	.043	.224	.128	.041	.212	.122	.039	.201	.116	.038	
2.0	.236	.129	.040	.230	.127	.039	.219	.122	.038	.208	.117	.037	.199	.112	.035	
3.0	.223	.119	.036	.218	.117	.035	.208	.113	.034	.199	.109	.033	.191	.106	.033	
4.0	.210	.109	.032	.205	.108	.032	.197	.104	.031	.189	.101	.031	.181	.099	.030	
5.0	.197	.100	.029	.193	.099	.029	.186	.097	.028	.178	.094	.028	.172	.092	.028	
6.0	.185	.093	.027	.182	.092	.026	.175	.090	.026	.169	.088	.026	.163	.086	.025	
7.0	.174	.086	.024	.171	.085	.024	.165	.083	.024	.159	.082	.024	.154	.080	.024	
8.0	.164	.080	.023	.161	.080	.022	.156	.078	.022	.151	.077	.022	.146	.075	.022	
9.0	.155	.075	.021	.153	.074	.021	.148	.073	.021	.143	.072	.021	.139	.071	.020	
10.0	.147	.070	.020	.145	.070	.019	.140	.069	.019	.136	.068	.019	.132	.067	.019	

pcc	80%			70%			50%			30%			10%			0
pw	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	50%	30%	10%	0
pfc	20%			20%			20%			20%			20%			0
RCR	RCR:Room Cavity Ratio						Ceiling Cavity Exitance Coefficients(CCEC)									
0.0	.190	.190	.190	.163	.163	.163	.111	.111	.111	.064	.064	.064	.020	.020	.020	
1.0	.176	.157	.140	.150	.135	.120	.103	.093	.083	.059	.054	.048	.019	.017	.016	
2.0	.165	.132	.105	.141	.114	.091	.097	.079	.063	.056	.046	.037	.018	.015	.012	
3.0	.155	.114	.081	.133	.098	.070	.092	.068	.049	.053	.040	.029	.017	.013	.009	
4.0	.147	.100	.064	.126	.087	.056	.087	.060	.039	.050	.035	.023	.016	.011	.008	
5.0	.140	.089	.052	.120	.077	.045	.083	.054	.032	.048	.032	.019	.015	.010	.006	
6.0	.133	.081	.043	.114	.070	.038	.079	.049	.027	.046	.029	.016	.015	.009	.005	
7.0	.126	.073	.037	.109	.064	.032	.075	.045	.023	.044	.026	.013	.014	.009	.004	
8.0	.120	.068	.031	.103	.059	.027	.072	.041	.019	.042	.024	.012	.013	.008	.004	
9.0	.115	.063	.027	.099	.054	.024	.068	.038	.017	.040	.023	.010	.013	.007	.003	
10.0	.109	.058	.024	.094	.051	.021	.065	.036	.015	.038	.021	.009	.012	.007	.003	

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-30

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

UGR(Unified Glare Rating) Table

ceiling/cavity	0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
walls	0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions	Viewed crosswise					Viewed endwise				
x = 2H y = 2H	30.4	31.7	30.7	31.9	32.1	16.0	17.3	16.2	17.5	17.7
3H	31.6	32.8	31.9	33.0	33.2	17.4	18.6	17.7	18.8	19.0
4H	31.5	32.7	31.8	32.9	33.2	18.1	19.2	18.4	19.5	19.7
6H	31.5	32.5	31.8	32.8	33.0	18.7	19.8	19.1	20.1	20.3
8H	31.4	32.4	31.7	32.7	33.0	19.0	20.0	19.3	20.3	20.6
12H	31.4	32.3	31.7	32.6	32.9	19.2	20.2	19.5	20.4	20.7
4H 2H	30.1	31.3	30.4	31.5	31.7	17.2	18.3	17.5	18.6	18.8
3H	31.3	32.3	31.7	32.6	32.9	18.5	19.5	18.8	19.8	20.1
4H	31.3	32.2	31.7	32.5	32.8	19.2	20.1	19.6	20.4	20.8
6H	31.2	32.0	31.6	32.3	32.7	19.9	20.7	20.3	21.1	21.4
8H	31.2	31.9	31.6	32.3	32.6	20.3	21.0	20.7	21.3	21.7
12H	31.1	31.8	31.5	32.2	32.6	20.5	21.2	20.9	21.6	21.9
8H 4H	31.2	31.9	31.6	32.2	32.6	19.5	20.2	19.9	20.6	21.0
6H	31.1	31.7	31.5	32.1	32.5	20.3	20.9	20.8	21.3	21.7
8H	31.1	31.6	31.5	32.0	32.4	20.7	21.3	21.2	21.7	22.1
12H	31.0	31.5	31.5	31.9	32.4	21.1	21.6	21.6	22.0	22.5
12H 4H	31.1	31.8	31.5	32.2	32.6	19.5	20.2	19.9	20.5	20.9
6H	31.1	31.6	31.5	32.0	32.4	20.4	20.9	20.8	21.3	21.8
8H	31.0	31.5	31.5	31.9	32.4	20.8	21.3	21.3	21.7	22.2
Variations with the observer position at spacings:										
S = 1.0H	+ 1.2 / - 1.4					+ 0.5 / - 0.6				
1.5H	+ 2.7 / - 5.2					+ 0.9 / - 0.5				
2.0H	+ 3.9 / - 9.9					+ 0.1 / - 0.1				

CIE Pub.117 Corrected 3850 lm Total Lamp Luminous Flux.(8log(F/F0) = 4.7)

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-30

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

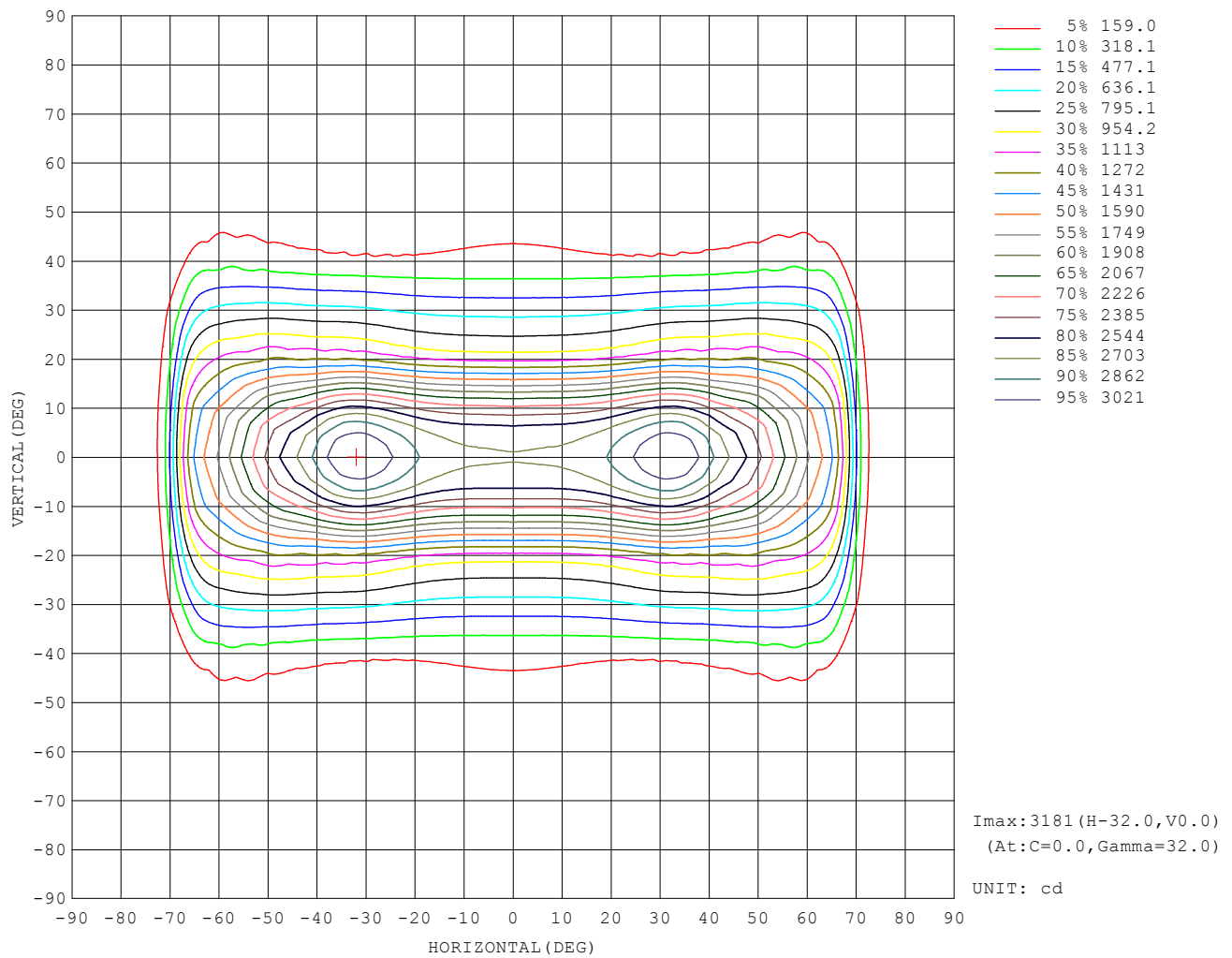
UTILIZATION FACTORS TABLE

REFLECTANCE										
Ceiling	0.8	0.8	0.8	0.7	0.7	0.7	0.5	0.5	0.5	0
Walls	0.7	0.5	0.3	0.7	0.5	0.3	0.7	0.5	0.3	0
Working plane	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0
ROOM INDEX	UTILIZATION FACTORS (PERCENT) $k(RI) \times RCR = 5$									
$k = 0.60$	67	58	52	67	57	52	66	57	51	46
0.80	77	68	61	76	67	61	75	66	61	55
1.00	85	76	70	84	75	70	82	76	69	63
1.25	91	83	77	90	82	77	87	81	76	70
1.50	95	88	82	94	87	82	91	85	80	74
2.00	101	94	89	99	93	88	96	91	87	80
2.50	104	98	93	102	96	92	98	94	90	83
3.00	107	101	97	105	100	96	101	97	94	86
4.00	110	105	102	107	104	100	103	100	98	90
5.00	112	108	105	109	106	103	105	102	100	92
ROOM INDEX	UF (total)									Direct
According to DIN EN 13032-2 2004			Suspended					SHRNOM = 1.25		

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.500m [K=1.0000]
Remarks:

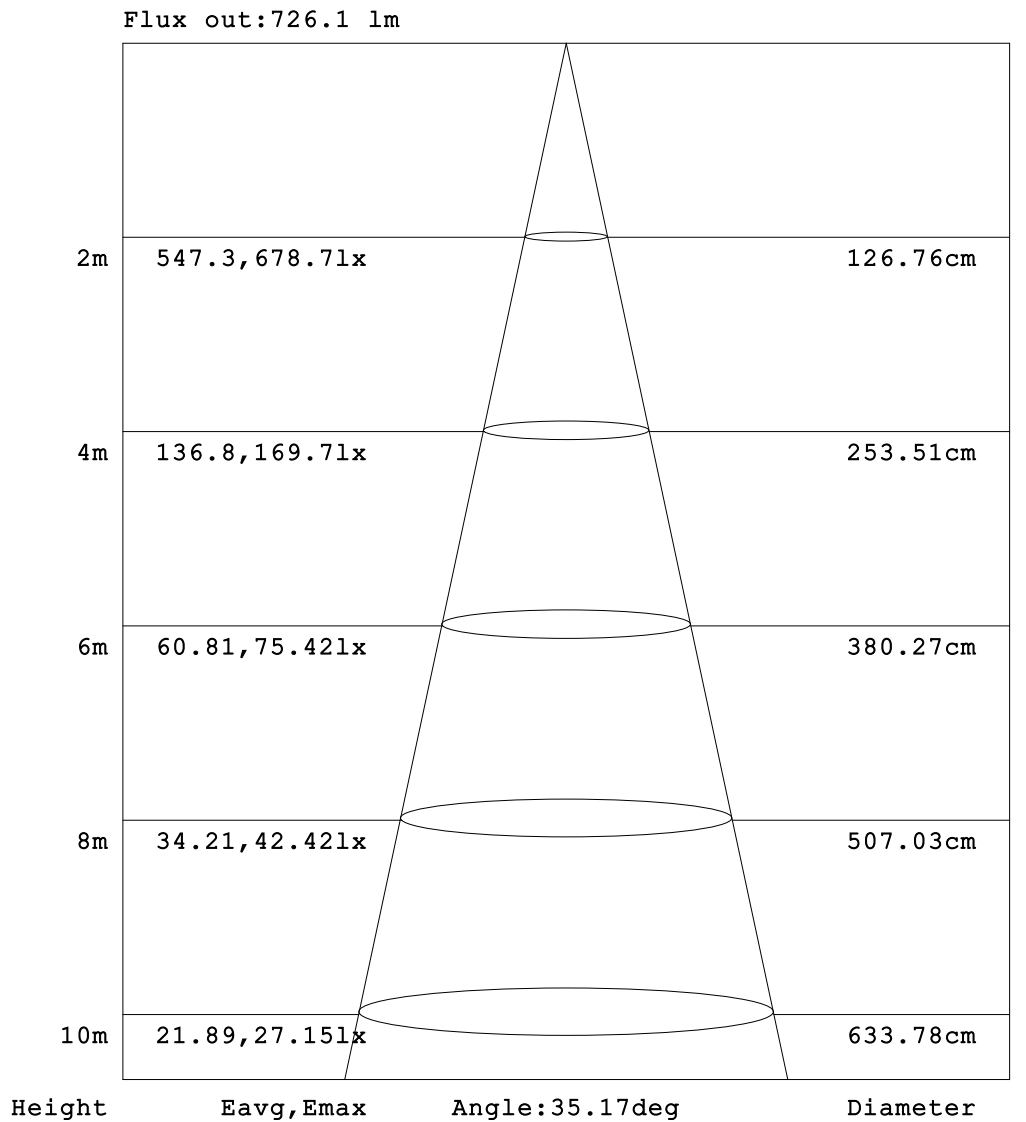
ISOCANDELA DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.500m [K=1.0000]
Remarks:

AAI Figure

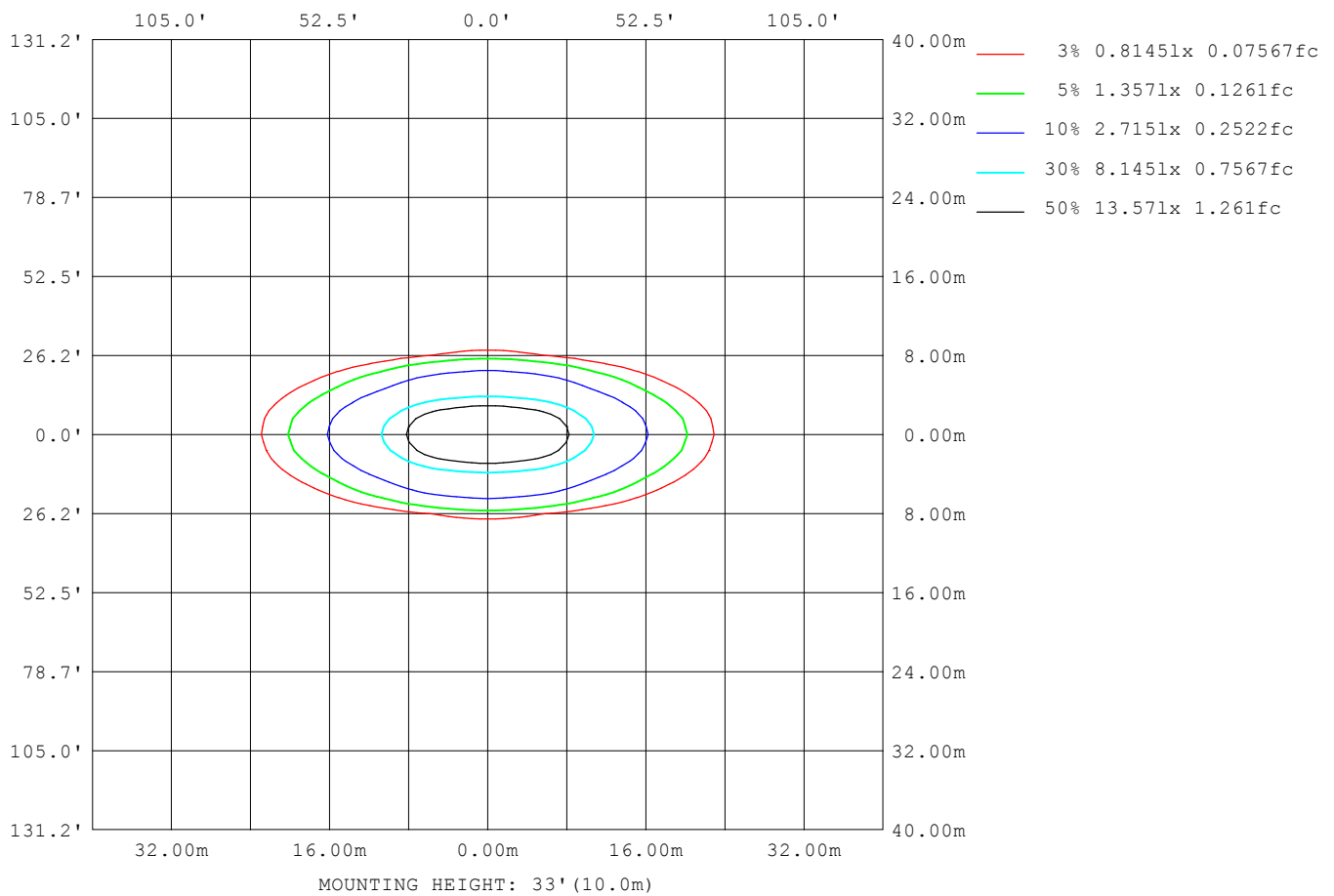


Note: The Curves indicate the illuminated area and the average illumination when the luminaire is at different distance.

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.500m [K=1.0000]
Remarks:

ISOLUX DIAGRAM



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-30

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

LED Avg.L Report

Test:U:230.0V I:0.1377A P:30.79W PF:0.9722 Lamp Flux:3850.02x1 lm		
NAME: LHB01-30	TYPE:30W	WEIGHT:
SPEC.:5000K Ra70 40130DEG L02804	DIM.: 0.28*0.137*0.102	SERIAL No.:
MFR.:	SUR.:0.25*0.1	Shielding Angle:

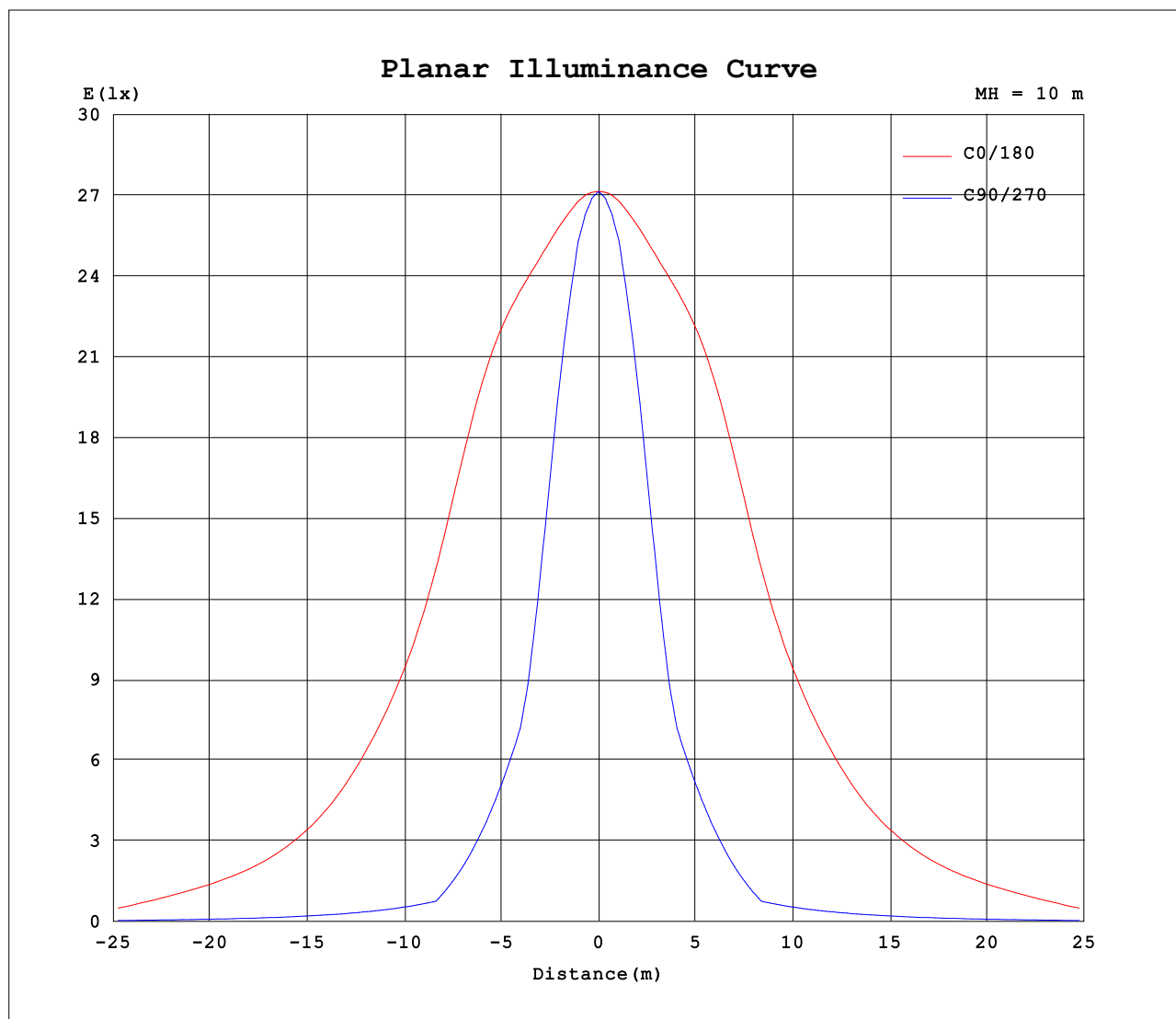
AvgL	cd/m2
L_0~180 (65) av	136980
L_0~180 (75) av	9587
L_0~180 (85) av	723
L_90~270 (65) av	9725
L_90~270 (75) av	9744
L_90~270 (85) av	10374
L_45 (65) av	8715
L_45 (75) av	7779
L_45 (85) av	8481

Standard: GB/T 29293-2012

C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature:25.3DEG
Operators:
Test Date:2017-03-30

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

Planar Illuminance Curve



C Range: 0 - 360DEG
C Interval: 5.0DEG
Test Speed: HIGH
Temperature: 25.3DEG
Operators:
Test Date: 2017-03-30

γ Range: 0 - 90DEG
 γ Interval: 0.5DEG
Test System: EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity: 65.0%
Test Distance: 9.500m [K=1.0000]
Remarks:

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

```

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

```

```

Range: 0 - 90DEG
Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

```

UNIT: cd

```

γ Range: 0 - 90DEG
γ Interval: 0.5DEG
Test System:EVERFINE GO-2000A_V1 SYSTEM V2.0.295
Humidity:65.0%
Test Distance:9.500m [K=1.0000]
Remarks:

```